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(19) **United States**(12) **Patent Application Publication** (10) Pub. No.: **US 2004/0030611 A1****Byrne**(43) Pub. Date: **Feb. 12, 2004**(54) **COLLABORATIVE COMMERCE HUB****Publication Classification**(76) Inventor: **Patrick Byrne, New South Wales (AU)**(51) Int. Cl.⁷ **G06F 17/60**(52) U.S. Cl. **705/26**

Correspondence Address:

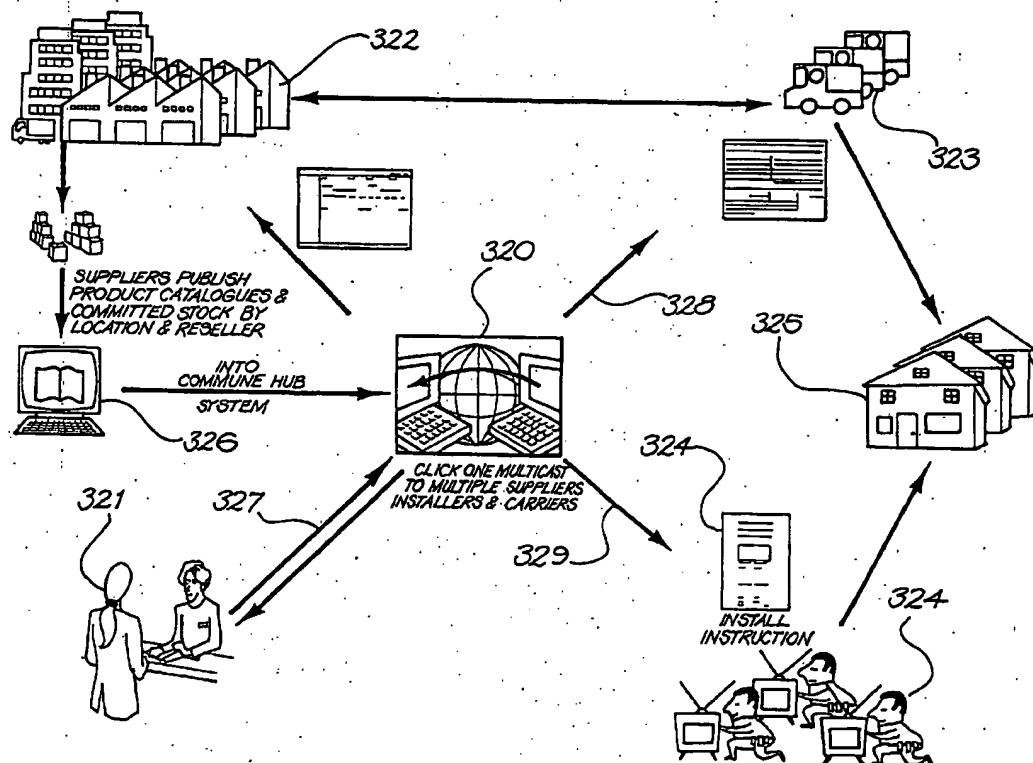
WOOD, PHILLIPS, KATZ, CLARK &**MORTIMER****500 W. MADISON STREET****SUITE 3800****CHICAGO, IL 60661 (US)**(57) **ABSTRACT**

A server acts as the hub of a collaborative commerce system. Suppliers of goods or services self publish information to the hub. Buyers are able to query the hub for product and service availability, price etc. Buyers are able to integrate real time multi product and multi service orders from multiple suppliers, carriers and field serve providers and thus secure available goods as well as the delivery and installation of those goods from the records available on the hub. Once an order is complete to the buyer's satisfaction, the order is transmitted to the hub. The hub then transmits the appropriate information to the relevant suppliers, carriers and installers as required. The system also provides for a system of virtual partitioning of a supplier's inventory.

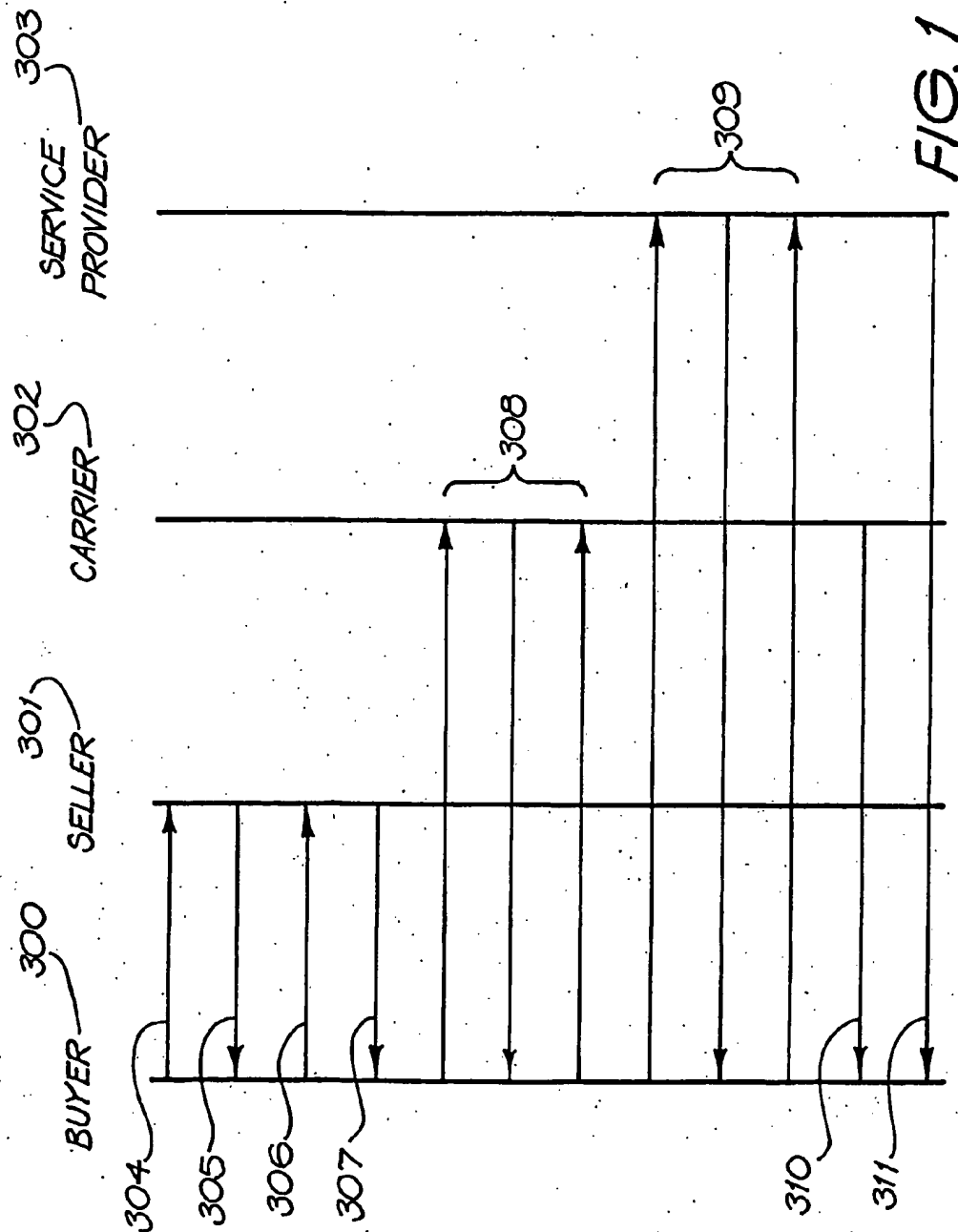
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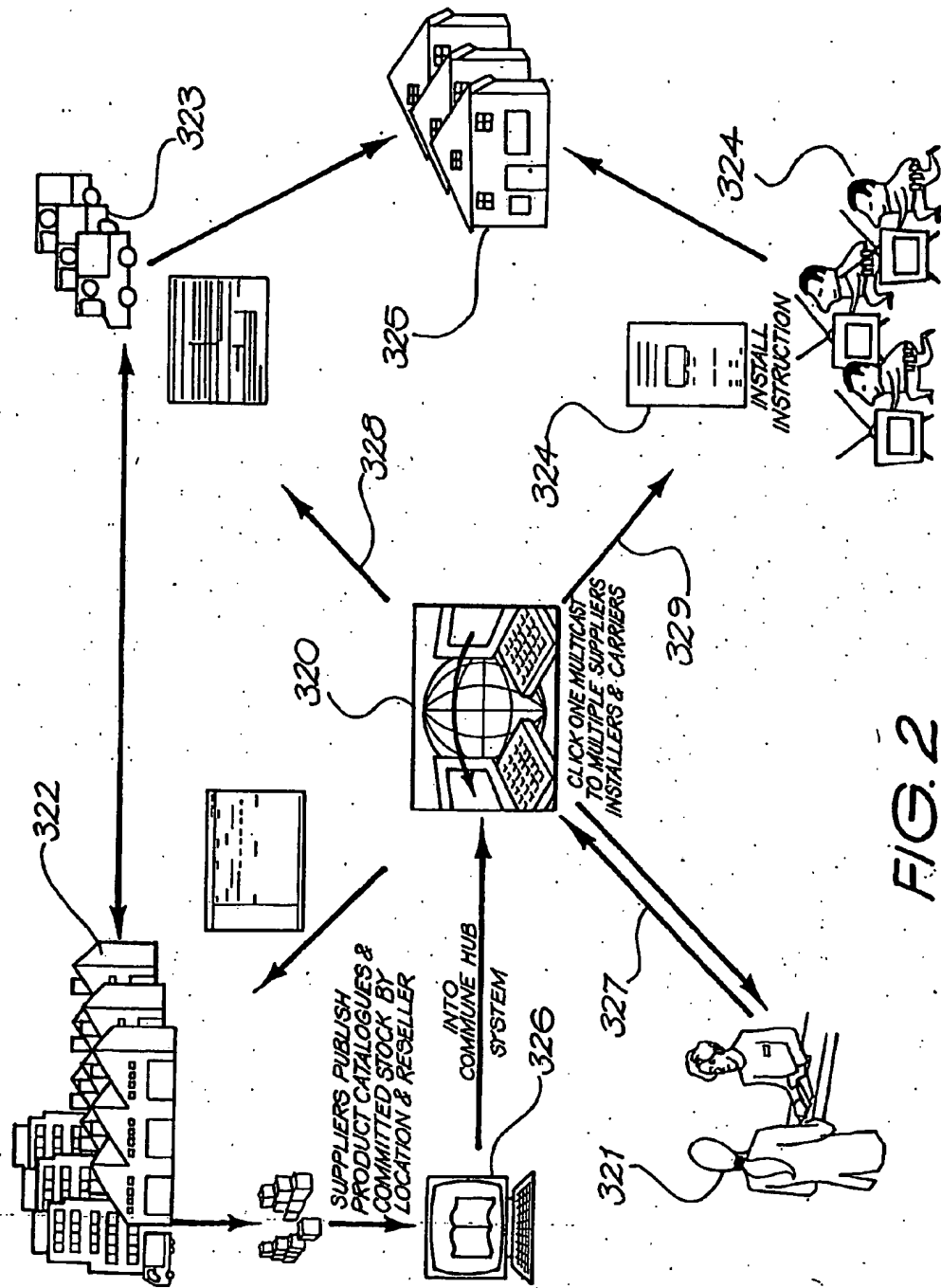
Nov. 15, 2000 (AU) PR 1637

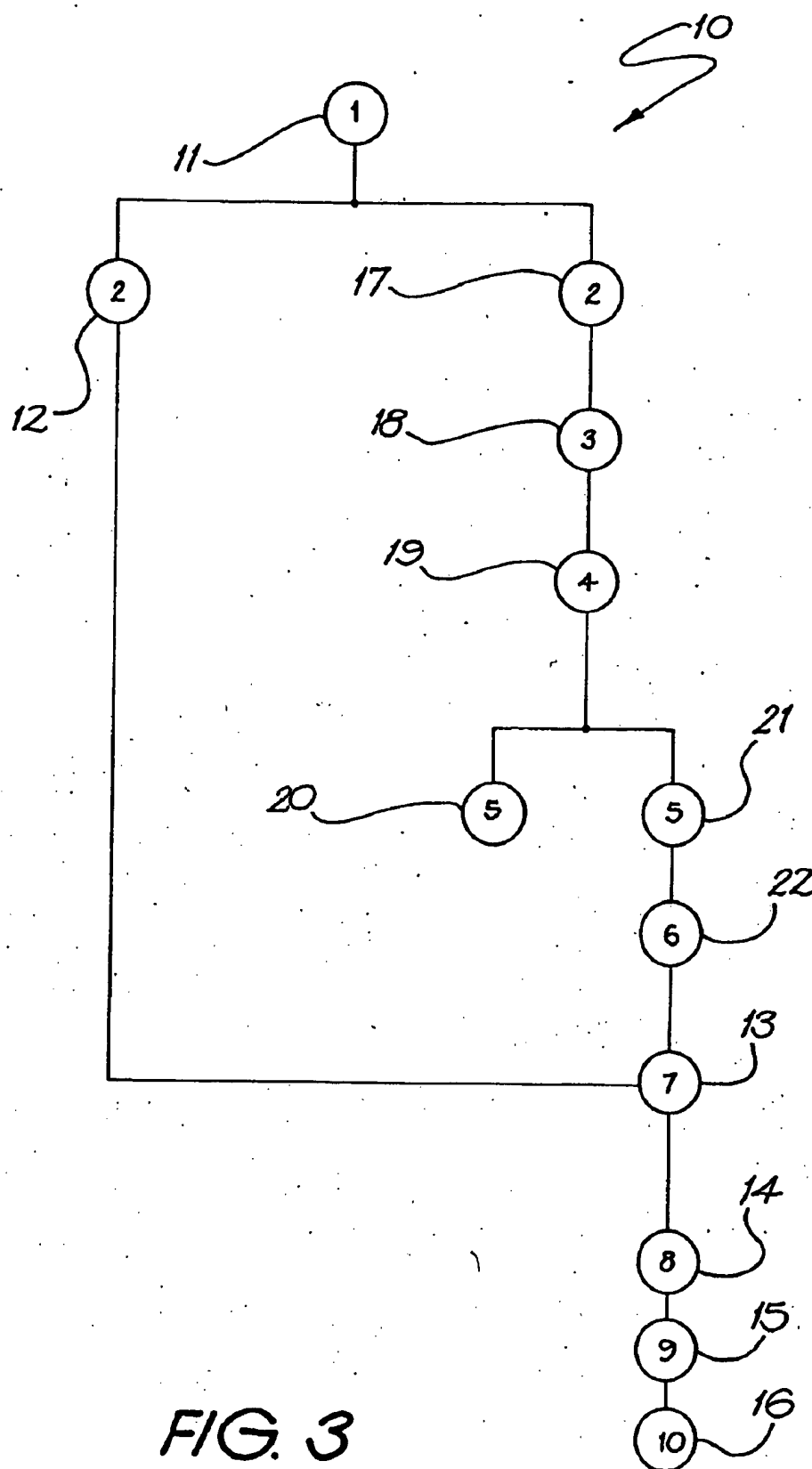
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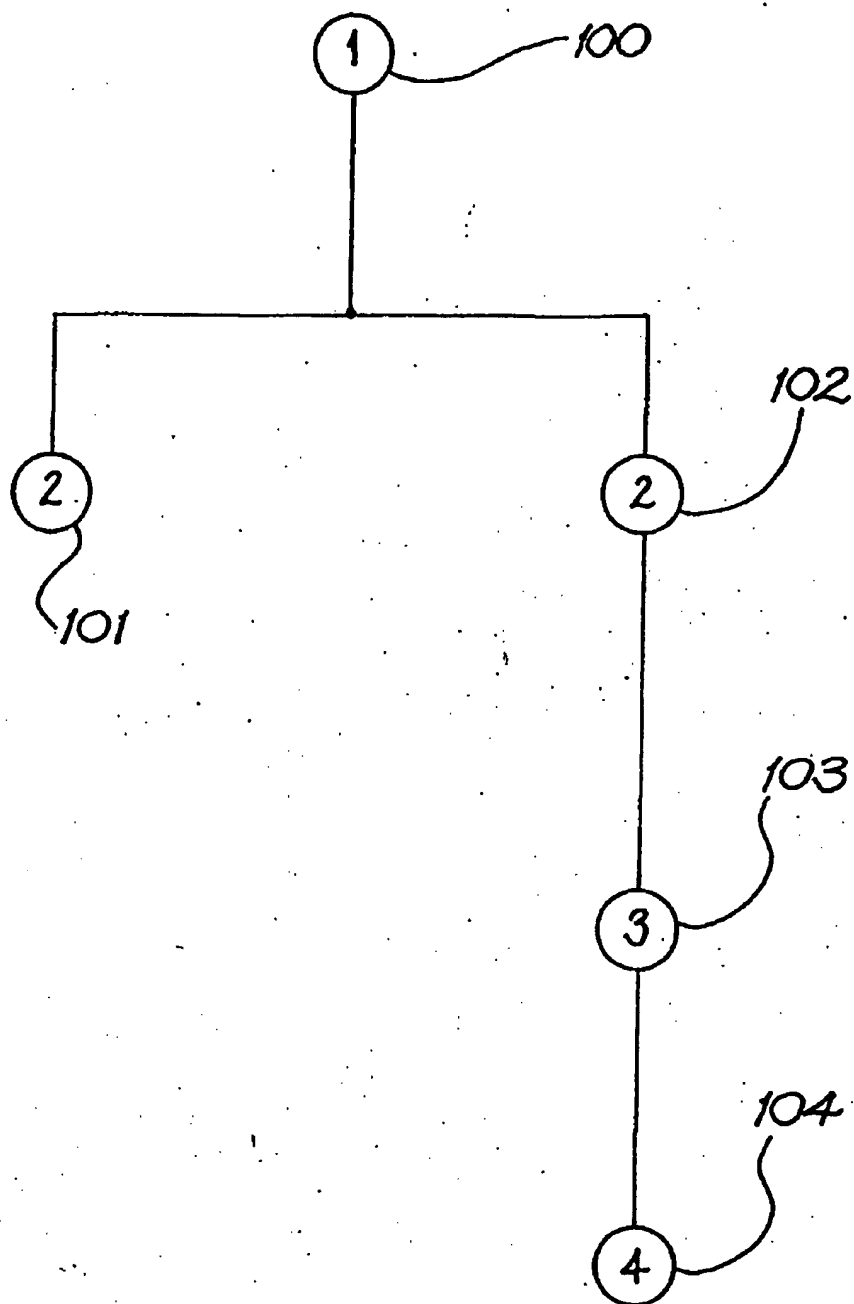


FIG. 4

Work Order

Work Order Number

Please quote this number on all correspondence

Retailer Name :		Branch Name :	
Name:		Installation Time:	
Address 1:		Installation Date:	
Address 2:		Product:	
Address 3:		Make:	
City/Town:	Post Code/Zip:	Model:	
Phone #:	Facsimile #:	Category:	
Phone #:	Mobile/Cell #:	Class:	
		Serial No.:	

Special Instructions

Customer

Customer Care Questionnaire

1. Did the installer arrive on time ?
2. Was the installer neat and tidy ?
3. Was the installer courteous and listen to your requests ?
4. Was the installation completed on the same day or within the quoted timeframe ?
5. Did the installer advise the best location for the installation of the product ?
6. Has the installation been completed to your satisfaction ?
7. Was the product fully demonstrated to your satisfaction ?
8. Was the product fully operational on completion of installation ?
9. Do you understand all the products features ?
10. Do you understand the products maintenance requirements ?
11. Was the installation area left clean and tidy ?
12. Was the installation completed without damage to your property ?

Y	N

Installer

Quality Assurance Check List

1. Was the installation site dry and safe ?
2. Was the installation site flat and stable ?
3. Were all the recommended minimum clearances adhered too ?
4. Were all electrical cables terminated correctly ?
5. Were all manufacturers tests and basic operations performed ?
6. Did you demonstrate the product basic features to the customer ?
7. Did you demonstrate the product maintenance requirements ?
8. Was the installation site left clean and tidy ?
9. Was there any damage to the customers property ?

Y	N

IF YOU HAVE ANSWERED "NO" TO ANY OF THE ABOVE QUESTIONS, WE WOULD APPRECIATE YOUR COMMENTS:

Customers Name :
Customers Signature :
Completion Date :

Installer Name :
Installer Signature :
Completion Date :

FIG. 5

Installer: CUSTOMER CARE QUESTIONNAIRE

CUSTOMER RESPONSES FOR ORDER 178-188-861-71:

QUESTION	CUSTOMER REPLY	
DID THE INSTALLER ARRIVE AT THE REQUESTED TIME?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
WAS THE INSTALLER NEAT & TIDY?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
WAS THE INSTALLER COURTEOUS & DID HE/SHE LISTEN TO YOUR REQUESTS?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
WAS THE INSTALLATION COMPLETED ON THE SAME DAY?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
DID THE INSTALLER DISCUSS THE LOCATION OF THE INSTALLATION OF THE APPLIANCE TO YOU?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
HAS THE INSTALLATION BEEN COMPLETED TO YOUR SATISFACTION?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
WAS THE SYSTEM FULLY DEMONSTRATED TO YOU?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
DO YOU UNDERSTAND ALL THE SYSTEM'S FEATURES?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
DO YOU UNDERSTAND ALL THE SYSTEM'S MAINTENANCE REQUIREMENTS?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
WAS THERE ANY DAMAGE DONE TO YOUR PROPERTY?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
WAS THE INSTALLATION AREA LEFT CLEAN & TIDY?	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

◀ BACK

◻ UPDATE

FIG. 6

Installer:
Q.A. RATING

YOUR QUALITY ASSURANCE RATING FOR THIS JOB IS 5 (TERRIBLE)
YOUR OVERALL QUALITY ASSURANCE RATING IS 3 (FAIR)

NEXT ▶

FIG. 7

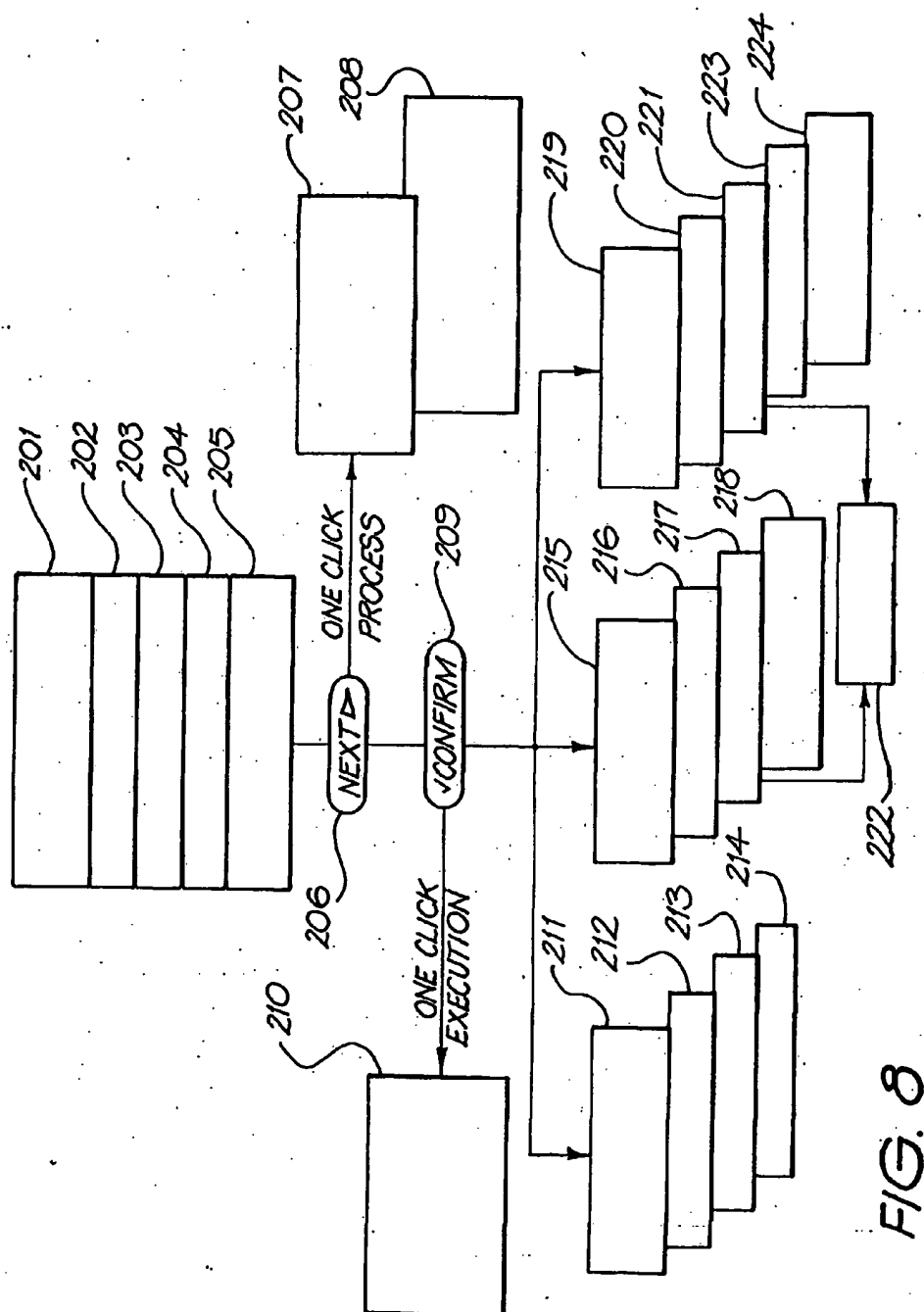


FIG. 8

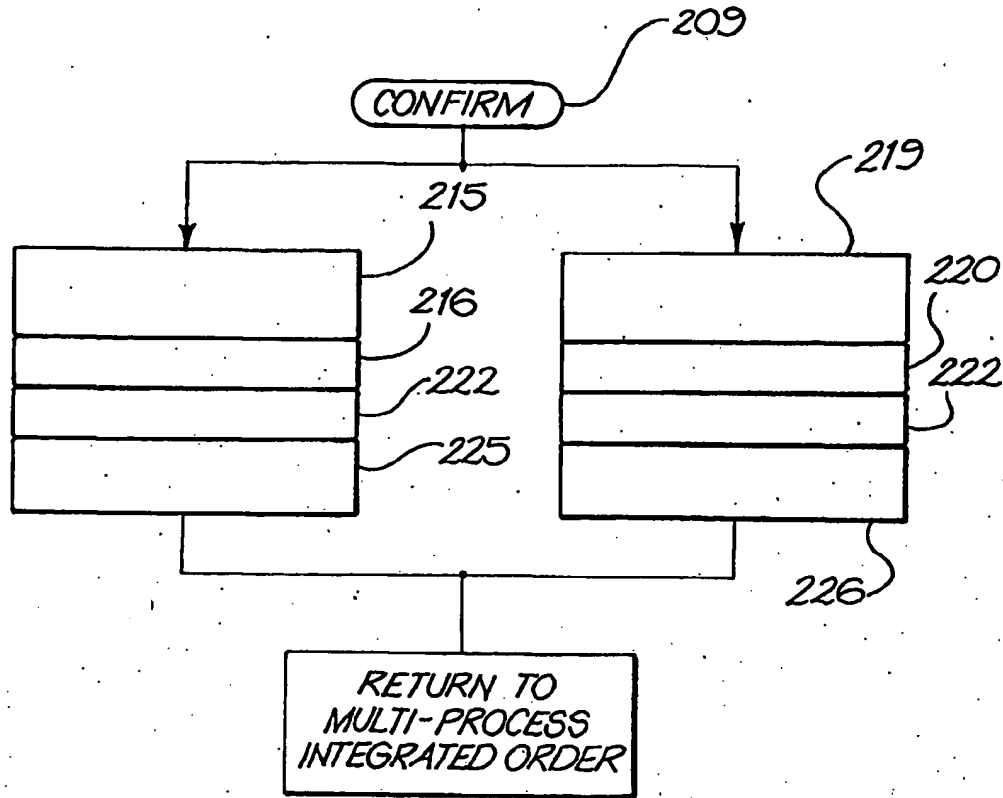


FIG. 9

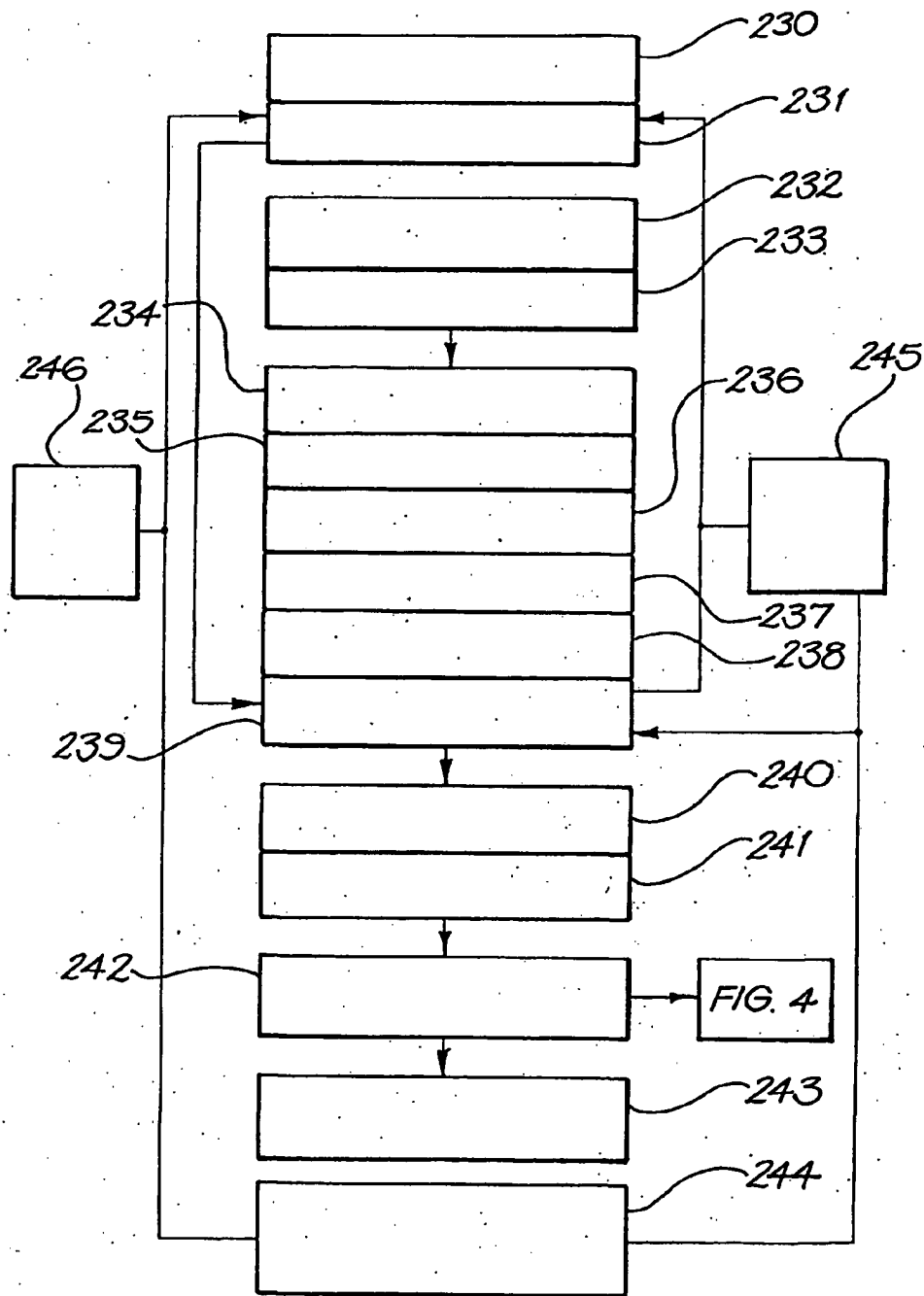


FIG. 10

COLLABORATIVE COMMERCE HUB

TECHNICAL FIELD

[0001] The invention pertains to the management, distribution and supply of goods and services, and to software and business methods which facilitate and integrate the coordination of suppliers, buyers, carriers and service providers (installer, field service warranty, call centres, third party warehousing) of goods/services with respect to a customer (end user).

BACKGROUND ART

[0002] A single conventional order for goods or services may comprise the purchase of a variety of different kinds of goods or services. Several different suppliers may be required to fulfil a particular order. Accordingly, several different carriers may be required to transport the goods from supplier through to the final delivery address or addresses. The final delivery addresses might be the same as or different than an installation address. In some situations, no delivery or installation is required.

DISCLOSURE OF THE INVENTION

[0003] The present invention provides methods, business methods, hardware and software for collecting, integrating, and interpreting order information, then multicasting orders to one or more suppliers, shipping advices to one or more carriers and installation advices to one or more service providers.

[0004] In preferred embodiments, the orders and advices are multicast to the appropriate parties according to a combination of self-published product supply factors including product data, category data, class data, capability data, capacity data, availability data and geographic service area or any combination of these factors.

[0005] In other embodiments, supplier data (including stock availability by product, warehouse location and buyers), carrier data (such as capability, capacity and availability by product, category, class, geographic area, quality of service and buyer), and service provider data (such as capability, capacity and availability by product, category, class, geographic area, quality of service and buyer) are published to buyers from an interactive searchable database, over a network such as the Internet.

[0006] In some embodiments, the execution of a single or multi supplier, carrier and service provider final order is completed and actioned, once compiled, with a single instruction, from a single mouse click in a graphical user interface.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] FIG. 1 is a schematic diagram illustrating the type of prior art message switching is alleviated by the present invention;

[0008] FIG. 2 is a schematic diagram illustrating an overview of the methods associated with the present invention;

[0009] FIG. 3 is a schematic diagram illustrating the current supplier single order process;

[0010] FIG. 4 is a schematic diagram illustrating the methods of the present invention;

[0011] FIG. 5 is a work order form with integrated customer care questionnaire;

[0012] FIG. 6 is a web based submission form for customer responses gathered in the questionnaire depicted in FIG. 3;

[0013] FIG. 7 is a web based service provider viewable quality assurance rating;

[0014] FIG. 8 is a schematic diagram illustrating a multi-process integrated order;

[0015] FIG. 9 is a schematic diagram illustrating rejected order processing; and

[0016] FIG. 10 is a schematic diagram illustrating real time inventory.

MODES FOR CARRYING OUT THE INVENTION

[0017] The invention provides an end-to-end supply chain management system and business methods designed to deliver financial benefits in real time to trading partners that operate in diverse vertical industries. Together and loosely defined, the presently discloses methods, software and hardware and is referred to, for convenience, as a system. The system coordinates cross-trading partners processes via a suite of software solutions.

[0018] The methods can be used simultaneously by multiple trading partners, on a many to many basis, allowing users to access the same functionality in real time. This allows multiple buyers to enter multi product—multi supplier integrated orders to coordinate the fulfilment of 3rd party field services (where applicable).

[0019] The present system does not rely on trading partner application-to-application message-switching systems to complete business transactions. As shown in FIG. 1, message switching comprises a sequence of messages which are exchanged between a buyer 300 and the other participants in the supply chain such as the seller 301, carrier 302 and Service Provider 303. The first message 304 passes between the buyer and the seller and request whether or not a particular product is available. The seller responds with a message 305, for example indicating that the product is available. Next the buyer places an order for the product 306. The seller confirms receipt of the product order with a separate message 307. The process continues with a series of exchanges between the buyer and the carrier 308. An exchange of messages is also conducted with the service provider 309. The process finishes with the carrier 302 sending proof of delivery 310 to the buyer and with the service provider forwarding proof of service 311 to the buyer. By eliminating the need for message switching:

[0020] The system does not require expensive, technically complex IT communications support traditionally required for applications message switching and backend integration.

[0021] The system handles multiple transaction volumes in comparison to individual point-to-point message switching/middleware solutions.

- [0022] The system present trading partners with a major competitive advantage.
- [0023] The system software is written in Cold Fusion and currently running in a SQL 7.0/2000 environment, though could equally run, for example, on an Oracle or DB2 platform as the applications business logic is database independent.
- [0024] As shown in FIG. 2, the system enables participants to self publish real time information via dynamic catalogues. The system then processes the transaction (in real time) and systematically notifies the relevant users of the resulting supply chain events. The system allows all supply chain partners to securely integrate and process their transactions in a shared environment.
- [0025] The system enables incremental implementation by each trading partner, with the system capable of being customised to suit individual users. The system currently comprises 10 individual software modules.
- [0026] Inventory Enables suppliers, in real time, to publish their stock availability to order or promise (e.g. advance shipping notice)—by product, sub product, category, class, location and buyer, on a 24x7 day basis, and receive orders electronically.
- [0027] Ordering Enables buyers to integrate in one order—multi product, multi supplier, multi carrier, multi service provider, multi sub orders in real time; then multicast only the relevant information to each supply chain partner.
- [0028] Scheduling Enables carriers and service providers to publish their capabilities, capacities, availability and pricing by product, category, class, service area (e.g. postal or zip code) and buyer. Automated work orders are then dynamically generated at the point of sale and received by the relevant supply chain partner.
- [0029] Settlement Enables trading partners to receive orders, generate invoices and settle accounts on line.
- [0030] Returns Enables buyers, suppliers carriers and service providers to coordinate the returns process (in real time), including management of return authorities, product disposition and test and repair facilities.
- [0031] Warranty Enables end user registration on line, establishing ownership, location and purchase dates. Links the end user, service centre and supplier automating the warranty claims process.
- [0032] Build Enables build to order, configure to order and ship to order at buyers point of sale; linking buyers, suppliers, carriers and 3rd party installers (in real time), to customise client orders, deliver and install them directly without intermediaries.
- [0033] Spares Brings inter-operability to suppliers and their service network in the areas of spare parts inventory, availability, pricing, shipping status, multi supplier integrated ordering, fulfilment and warranty/sales reconciliation. Also allows suppliers to broadcast service literature, service tips, product modifications, assembly delays/variations.
- [0034] Forward Enables one time data capture, dynamic concurrent workflows, and track and trace for freight forwarders, suppliers, manufacturers, domestic carriers, 3rd party warehousing and customs clearance agents. Marketing
- [0035] Enables suppliers to video stream, multicast product information, training promotion and product launches to individual or many buyers. Buyers can issue request for catalogue inclusions and suppliers can respond.
- [0036] The system's software platform contains all of the above specified business processes and work flows within its core. Members need only self publish their data to specific modules within the core. As shown in FIG. 2, the Hub or central server 320 integrates and co-ordinates the actions of a buyer 321 a product supplier 322, a carrier or deliverer 323 and installer or other service provider 324 and ultimately the consumer 325. Using FIG. 2 as an overview, it can be seen that the supplier 322 self publishes dynamic product catalogues and real time inventory availability 326 electronically and into the Hub 320. This allows the seller or buyer 321 to access the self published catalogues in real time and place a confirmed order or multi order 327 with the Hub 320. This same multi product order may be accompanied by a multiple delivery and installation orders and instructions. The Hub forwards the appropriate delivery instructions 328 to the appropriate carrier and simultaneously provides work orders for installations 329 to the appropriate service providers 324. Service providers is intended to refer to installers or other field service providers. Ultimately, the Hub co-ordinates the delivery schedule of the carrier 323 with the installation schedule of the service provider 324 so that the ultimate consumer 325 receives the appropriate products and service at the correct time.
- [0037] Further small freight forwarding company, using the system, can combine the services of other members within the network, offering an end-to-end fulfilment service to their customer. In effect, providing all of the benefits of a large multinational freight forwarder, but without the unwelcome financial overhead. The freight forwarder, when combined with other clustered networked partners, is then able to present as a virtual organisation to the marketplace.
- [0038] The system's software modules are based upon open systems technology. The system offers the user increased flexibility and easy integration to other networks. As a network centric system, users can choose to connect to the system via intranet, Internet or Virtual Private Network (VPN).
- [0039] The system provides for self-registration, self-regulation and end user management, which allows for rapid implementation of any supply chain strategy. The system scales from a thin client (browser based PC) requiring no data mapping, through to full back end legacy systems integration. Thus, the system facilitates high-speed scalability for-any supply chain network participants.
- [0040] The system is network centric and customer centric (at its presentation layer); there are no geographic or industry impediments to the global reach and usefulness of the system.
- [0041] As shown in FIG. 3, the prior art single order process 10, as seen from the buyer's perspective, commences with a buyer querying the internal computer system for the status of the selected goods 11, that is, whether or not the selected goods are in stock. If the goods are in stock/store 12, the next step 1.4 is to arrange delivery with the store

driver or other delivery company and contact the customer to advise of a delivery date and supply the customers with the identity of the installer(s), if required. At this point, the customer would arrange the installation themselves directly with the service provider 14. Finally, the goods are delivered to the customer 15. Installation occurs 16 some time after delivery is effected.

[0042] If the goods are out of stock, then the buyer's query 11 is followed by multiple phone calls and faxes to suppliers 17. Enquiries to suppliers will generally be restricted to normal business hours (e.g. Monday-Friday 9-5 pm) however in the case of late night or weekend trading, it is expected that the supplier will respond on the next business day, perhaps later. A negative response from the supplier will require the selection of an alternate supplier, which further delays the delivery of stock. Once the relevant enquiries are made 17, the buyer awaits confirmation from the supplier of stock availability by telephone or facsimile 18.

[0043] Upon confirmation, the buyer advises the customer of the status by telephone or facsimile and receives a customer decision 19. If the customer decides not to proceed, the sale is lost and the order is cancelled 20. If the order is to proceed, it is placed by telephone or facsimile 21. Eventually, the stock is delivered to the buyer store 22 and from this point on, the process follows the same path as an order which is in stock 12, that is, proceeding to eventual delivery to the customer 15 and installation 16 of product, if required.

[0044] It is worth noting that the above referenced conventional method requires stock delivery to the buyer store/warehouse prior to customer delivery. Further, the prior method is relatively inflexible as to the timing of matter such as delivery and installation, old product removal, and packaging removal.

[0045] As shown in FIG. 4, the present invention proposes methods which are available at all times of the day and night, every day of the year. This is because all parties to the system can connect to a 24 hoursx7-day central hub of a network and interact with the scalable system using either an Internet browser or systems integrated software.

[0046] The method commences with a buyer querying a remote database with regard to stock availability, as dynamically self published by the goods suppliers 100 in advance. The database is accessible over the Internet and uses a conventional browser, based on the entry of the appropriate user ID and password. In the alternative, the system may be systems integrated into a buyer, supplier, carrier, or service provider's enterprise resource system (ERP). If a particular product is out of stock, the buyer is notified on-line immediately 101 and proceeds to re-enter a new query based on other goods and/or suppliers. If the database indicates that the selected goods are in stock then the buyer proceeds to the next step 102. This next step requires the buyer to input the customer selections, that is, the suppliers and models of the selected goods as well as the times and dates for delivery, installation, removal of packaging and the removal or disposal of the old product. Once this data is entered and integrated on one screen, the buyer proceeds to the next and final step 103. The buyer presses a single "button" in a graphical user interface, which initiates a multicast. The multicast comprises of orders which are issued to multiple appropriate suppliers, as well as multiple shipping advices to

the appropriate carriers required to transport the goods directly to the customer or agent, as well as multiple installation advices to the one or more appropriate service providers which may be required to complete the order, by customer defined date and time schedules at the point of sale.

[0047] A distinguishing feature of the invention is the way that suppliers, carriers and service providers are selected (capability, capacity, availability, area, product, category, class and quality) to complete an order once the customer related data is entered into the system. With respect to installations, each service provider will be provided with a work order 110 (FIG. 5), which is a physical form, which is carried into each installation. In order to get paid, the service provider must obtain a quality report in the form of a customer care questionnaire 111 (FIG. 5) from the appropriate customer. The customer is presented with a form and asked to rate the service provider according to the quality of the job performed. Factors which might be considered include promptness, tidiness, quality of installation, courteousness etc. The service provider is then required to fax a copy of the quality report 110 and 111 to a central place of reporting. The service provider also inputs the data from the customer's report into an electronic form 112 (FIG. 6) or Internet based system with the proviso that the hard copy also be faxed as mentioned above. A service provider is thereby rated according to the quality of his work by the customer. A service provider may log onto the system and view their own quality rating 113 (FIG. 7) as evaluated by their various customers. Where the order data entry step 102 (FIG. 4) determines that two or more service providers are suitable for a particular order, the one with the highest quality rating may be selected to fulfil the order.

[0048] Selection of the appropriate carrier may be performed in much the same way. A carrier may be selected according to their capability, capacity or price but a carrier may also be selected according to their quality as it is evaluated by their customers and input to a central record keeping location as mentioned above.

[0049] Selection of a suitable supplier of goods may also be performed on a quality-rating basis. A supplier can be rated according to their consistency and timeliness of supply, rate of product returns or other factors, which form a reasonable basis for performing a quality evaluation. In this way, a supplier with a higher quality rating can be selected over a supplier with a lower quality rating with regard to the fulfilment of any particular order.

[0050] From the above description it will be appreciated that the ability to search a database of real time multi supplier published available inventory information coupled with the ability to integrate multi supplier, multi carrier and multi service provider orders, with customer defined date and time schedules in one screen and then generate various multicasts to suppliers, carriers and service providers in a one click process, provides a process transformation with enormous flexibility and streamlined operation when compared to prior methods. The business processes outlined are applicable to any industry, for example, Information Technology & Telecommunications (ITT), Automobile, Insurance, Freight Forwarding etc., where facilitation, integration and co-ordination of suppliers, buyers, carriers, and service

providers (Installer, Field Service Warranty, Call Centres, Third Party Warehousing) of goods/services with respect to the customer (end user).

[0051] FIG. 8 illustrates particular examples and specific details of the methods associated with the present invention. As previously described, the process of initiating a multi-process integrated order may be seen as beginning at the point of sale 201 to a one with the buyer logging into a central server from, for example, conventional PC running conventional browser software. The buyer then enters the order number 202 and the customer details 203. At this point, and using the browser software, the buyer can confirm (from existing published information) in real time the multi product and multi supplier product availability 204. The buyer is then able to define single or multi deliver point instructions, single or multi carrier service instructions and single or multi service provider service instructions 205. Once these details are entered through the browser interface, the buyer clicks a single button, for example, a "next" button 206 and this causes the processing of the order in real time 207. The result of the order processing is that carriers and service providers are selected automatically on the basis of self published capability, capacity, availability, service area, category, class, price, and quality of service 208. Once the order has been fully processed and prepared (206, 207 and 208) the pressing of a single confirmation type button 209 causes the execution of the order in its entirety. Once the order is confirmed 209 this causes the execution, dynamically and in real time of a concurrent series of supply chain events, particularly the multicasting of the relevant details to the relevant participants in the supply chain 210. Confirmation 209 and the subsequent execution 210 causes the relevant product orders to be multicast to each applicable supplier, the relevant consignment notes to be multicast to each applicable carrier, the relevant service work orders to each applicable service provider.

[0052] As further shown in FIG. 8, confirmation 209 causes, for example, the suppliers to receive email notifications 211 with hyper links to log into the system to retrieve orders. Consequently, the orders are retrieved 212 whereupon the supplier accept purchaser orders and makes products available for dispatch to end users 213. The order is acknowledged by email, the date and time stamp being recorded 214.

[0053] Similarly, upon confirmation, 209 service providers receive email notification with hyper links to log into the system to retrieve orders 215. The service provider retrieves orders and where applicable, special job instructions 216. The service providers then accept and print orders 217. When installation is physically completed, the service provider confirms by completing electronically the quality assurance sheet which is provided by the system 218.

[0054] As further shown in FIG. 8, upon confirmation 209, carriers receive email notification with hyper links to log into the system to retrieve orders 219. This causes the retrieving of orders and where applicable, special job instructions 220. The carrier accepts orders 221 (or rejects them 222) and when accepted, picks up products and delivers them to the end users 223. The carriers confirm delivery by completing electronically, a quality assurance form provided by the system 224.

[0055] As shown in FIG. 9, the rejection of an order by a service provider or carrier 222 causes the system to re-allocate the order to the next available service provider 225 or next available carrier 226.

[0056] As shown in FIG. 10, the implementation of the software and methods of the present invention provide a process of electronically managing, presenting and dynamically allocating real time inventory availability to an order or a promise (Advance Shipping Notice) across a supply chain network with multi suppliers and multi buyers utilising the same functionality, simultaneously. In order to do this, a supplier creates a virtual partition within their Legacy Warehouse Management System 230. The supplier then consigns inventory into that partition ready to be loaded into the system of the present invention 231. As part of the real time inventory process, the systems administrator defines categories and classes by industry and/or supply chain 232, 233. Consequently when a supplier logs in 234 they are able to add new products including product characteristics 235. The supplier may also add a new warehouse, including warehouse characteristics 236 and a warehouse service area 237 and warehouse opening hours 238. This gives the supplier the ability to dynamically consign and allocate products to each buyer 239. Thus, when a buyer logs into the system 240 they are able to allocate an internal product code and resale price 241 which enables the placement of an order 242 (see FIG. 8). The placement of an order 242 causes the inventory to be decremented by the system whereupon the supplier is notified of an electronic order 243. Accordingly, the supplier receives the order and is able to pick the order from the virtual partition within their legacy warehouse management system 244. When a supplier receives an order and dynamically consigns or allocates a product to a buyer 239 the process proceeds according to a business rule for dynamically decrementing stock 245. To decrement stock, a supplier dynamically decrements stock within the system, whereupon stock is decremented within the virtual partition 230. Similarly, a business rule applies to the incrementing of stock 246. To increment stock, suppliers consign stock into the virtual partition 231 whereupon stock is dynamically consigned and allocated within the system.

[0057] The present invention provides numerous benefits to customers-when compared to existing processes. From the preceding description it will be appreciated that customers are able to check and confirm the availability of products on-line. Unlike existing processes customers are able to arrange delivery and installation, on the spot, at the point of sale. Thus customers are able to, at one time, shop for, complete a purchase, arrange for delivery and installation and arrange for disposal of no longer needed goods and packaging. From the customers perspective, delivery is scheduled at the point of sale to suit the customers time schedule as the date and time of scheduling of delivery and installation are accomplished at the point of sale. Because both the old product and the packaging disposal can be arranged at the point of sale to occur when the new product is delivered, the customer is removed from the disposal process. This helps ensure that large appliances like fridges, washing machines and stove, etc are removed and disposed of according to environmental standards.

[0058] The retailer, buyer or commercial buyer also is delivered benefits by practicing the methods and teachings of the present invention. Productivity is enhanced because

stock availability is immediately available on-line from suppliers. The system also allows for multi-supplier order integration, multi-service provider advice integration and multi-delivery point shipping advice to carriers, all on one screen. Further, the system provides for the multi-cast of all orders and advice notes in a "one click" process. The buyer is also able to participate in the system using only a web browser and can therefore trial the system on a risk free basis. The trial system is fully scalable to a full systems integration utilising the buyers ERP systems. Further, store inventory orders can be scheduled (date and time slot) to suit buyers and then reconciled electronically. From a storage perspective, the invention results in a reduction of inventory, associated overheads and working capital requirements. The system boosts sales productivity by providing on-line supplier stock availability, on-line supplier ordering at the point of sale and is fully traceable if anything goes wrong with ordering or delivery.

[0059] For the supplier of goods (or services) there are numerous advantages. The supplier can forecast dynamically against actual sales, rather than the "just in case" model being used today. Risks are produced by providing a large reduction in excess inventory, and price protection for buyers and inventory right-downs. Warehousing and distribution productivity are improved by providing dynamic inventory availability which is published to all participating buyers. Accordingly, the warehouse is open to buyers on a 24 hour come 7 day a week basis. The system also provides the aforementioned dynamic allocation of inventory to buyers. The system also provides suppliers with a digital record of purchase date and quality of product at the time of delivery for warranty purposes. Suppliers are also provided with on-line instant access to a warranty database. As for the sellers, systems integration can be implemented after the system has been tried, tested and proven to be cost effective, trials being conducted with a conventional browser. Delivery schedules for buyers are pre-booked reducing the instances of refused deliveries at the buyer store or distribution centre level. Further, all returns can be sorted, classified and disposed of without the supplier being involved in the handling of the product.

1. A method of executing an order on behalf of a buyer or many buyers comprising the steps of:

compiling self published real-time information from one or many product suppliers and/or one or many service suppliers onto a common transaction platform on a central server;

granting a buyer or many buyers simultaneous access utilizing the same real-time functionality on the common transaction platform over a network;

using the common transaction platform to accept from the buyer or many buyers, simultaneous queries as to the real-time availability of goods and/or services from one or many suppliers.

using the self published information on the common transaction platform to respond to simultaneous queries over the network, as to the real-time availability of the goods and/or services; then

using the common transaction platform to accept an order or simultaneous multiple orders for goods and services for one or many suppliers in real-time, from a buyer or

many buyers, automatically transmitting that order or many orders concurrently to a supplier or many suppliers of those goods and services.

2. The method of claim 1, wherein;

the server is also used to compile self published information from one or more providers of services related to the order;

using the server to accept from the buyer, a second query as to the availability of services related to the order;

using the self published information from the one or more providers of services related to the order to respond to the query, over the network, as to whether or not the services are available; then

using the server to accept an order for those services from the buyer and transmit that order concurrently to a selected provider of services and a supplier of the goods or services.

3. The method of claim 2, wherein:

a first provider of services related to the order is a carrier and the self published information includes information regarding availability, capacity, service area and price.

4. The method of claim 3, wherein:

a second provider of services related to the order is a field service provider and the self published information includes information regarding availability, capacity, service area and price.

5. The method of claim 1 wherein:

the sever processes, over the network, the order from the buyer and without further prompting forwards, portions of that order which are relevant to the supplier to the supplier.

6. The method of claim 5, wherein:

the forwarding is done by an e-mail message from the server to the supplier.

7. The method of claim 3 wherein:

the sever processes, over the network, the order from the buyer and without further prompting forwards, portions of that order which are relevant to the carrier to the carrier and also forward portions of that order which are relevant to the supplier to the supplier.

8. The method of claim 7, wherein:

the forwarding is done by an e-mail message from the server to the carrier and supplier.

9. The method of claim 4, wherein:

the sever processes, over the network, the order from the buyer and without further prompting forwards, portions of that order which are relevant to the field service provider to the field service provider and forwards, portions of that order which are relevant to the carrier to the carrier and also forward portions of that order which are relevant to the supplier to the supplier.

10. The method of claim 7, wherein:

the forwarding is done by an e-mail message from the server to the carrier, the supplier and the installer.

11. The method of claim 1, wherein:

the central server further comprises a software module which facilitates the generation of invoices and the settlement of accounts over the network.

12. The method of claim 1 wherein:

the central server further comprises a software module which facilitates the coordination of returns in real time.

13. The method of claim 1 wherein:

the central server further comprises a software module which facilitates the registration of warranty information and automation of a warranty claims process.

14. The method of claim 1 wherein:

the central server further comprises a software module which facilitates the supply of spare parts and provides for the self publication of spares information selected from the group comprising spare parts inventory, availability, pricing, shipping status, multi supplier integrated ordering, or fulfilment.

15. The method of claim 1 wherein:

the central server further comprises a software module which enables a supplier to supply or multicast product information to one or more buyers.

16. The method of claim 1 wherein:

multiple customers, multiple products, and/or services from multiple suppliers and service providers are integrated into a single system, in a many to many to many relationship.

17. The method of claim 1 wherein:

the length of the supply chain is longer than two (2) nodes, and each node may have a depth of one (1) or many entities.

18. The method of claim 1 wherein:

at each node of the chain there may be multiple entities independently operating either collaboratively, co-operatively or competitively.

19. The method of claim 1 wherein:

a particular entity at a particular node may adopt an operating model or structure (i.e. sub-contracting) which is different from other entities on that same node.

20. The method of claim 1 wherein:

the transaction processing occurs on the server not on the entities server.

21. The method of claim 1 wherein:

an entity or many entities may choose to participate selectively.

22. The method of claim 1 wherein:

a multiplicity of entities each of whom may have a different legacy system, can export data into the server and receive data from the server through a common transaction platform and common adaptors.

23. The method of claim 22 wherein:

the entities within a supply chain can participate without the need for middleware applications or point to point messaging.

24. The method of claim 8 wherein:

the alert to the supplier or many suppliers, and/or service provider or many service providers, across many nodes, may include short message service (SMS) text message to a mobile phone, or to another WAP (Wireless Application Protocol) device.

25. The method of claim 21 wherein:

an entities participation and the transactions allowed for that entity are governed by a set of business rules which are codified in the software and can be selectively applied.

26. The method of claim 21 wherein:

the business rules are applied to both the transaction and to the process of execution of that transaction.

27. The method of claim 26 wherein:

the business rules can be changed to accommodate the needs of specific supply chain entities, while still preserving a common structure in the transaction processing.

28. The method of claim 27 wherein:

multiple supply chains can be integrated into a network of supply chains.

29. The method of claim 28 wherein:

a single entity or a group of entities may participate in many supply chains, each of which is operating on a different server.

30. The method of claim 1 wherein:

entities may bulk upload data from an existing system into the server without the need to re-key data.

31. The method of claim 26 wherein:

business rules can be applied to bulk data being exported from a legacy system and intended to be published or imported into the server.

32. The method of claim 26 wherein:

completed transactions can have business rules applied to the data which in turn is exported back to a particular entities legacy system as input data to that system.

33. The method of claim 1 wherein:

an entity may offer all of its products and services, or a part thereof, or all of its capability or part thereof, and may change these dynamically at any time.

34. A method for a supplier or many suppliers of goods and/or services to create real-time inventory available to order or promise across a supply chain comprising the steps of:

a supplier or many suppliers creating a virtual partition within legacy warehouse management systems;

a supplier or many suppliers consigning inventory into those partitions to create partitioned inventories;

a supplier or many suppliers publishing the partitioned inventory to a collaborative commerce hub, whereupon the inventory is simultaneously accessible to one or many buyers in real-time;

a supplier or many suppliers dynamically allocating part or all of the partitioned inventory to a buyer or many buyers in real-time or batch; the partitioned inventory being-decremented in real-time when a buyer or many buyers accesses the same inventory functionality to place orders for goods and/or services in real-time.

35. The method of claim 34 wherein:

the length of the supply chain is longer than two (2) nodes, and each node may have a depth of one (1) or many entities.

36. The method of claim 34 wherein:

at each node of the chain there may be multiple entities independently operating either collaboratively, co-operatively or competitively.

37. The method of claim 34 wherein:

a particular entity at a particular node may adopt an operating model or structure (i.e. sub-contracting) which is different from other entities on that same node.

38. The method of claim 34 wherein:

a multiplicity of entities each of whom may have a different legacy system, can export data into the server

and receive data from the server. through a common transaction platform and common adaptors.

39. The method of claim 34 wherein:

a multiplicity of entities each of whom may have a different legacy system, can export data into the server and receive data from the server through a common transaction platform and common adaptors.

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